Application No. 09/879,339
Reply to Office Action Dated March 15, 2004

REMARKS

Overview

The Examiner has responded in the prior Office Action as follows: rejected claims 72-75, 97-115, 117-119 and 121-138 under 35 U.S.C. § 102(a) as being anticipated by John Bates, et al., "Middleware Support for Mobile Multimedia Applications," (1997); rejected claims 116 and 120 under 35 U.S.C. § 103(a) as being unpatentable over Bates in view of Schmidt, et al., "There is more to context than location," (November 1998); and provisionally rejected claims 72-75 and 82-138 under 35 U.S.C. § 101 based on statutory-type double patenting as being unpatentable over claims 62-71 and 76-147 of co-pending Patent Application No. 09/878,948.

Applicants hereby amend claim 72 in order to clarify the subject matter of their invention, and further hereby add new claims 139-163. Thus, claims 72-75 and 82-163 are now pending.

Analysis

As a threshold matter, Applicants note that the Examiner has indicated in the text of the prior Office Action that the first two previously submitted Information Disclosure Statements (IDSes) have been considered, but the returned copies of those two IDSes were not initialed by the Examiner. Applicants thus respectfully request that the Examiner confirm consideration of the references of these two IDSes (filed November 25, 2002 and October 3, 2003) by initialing each reference on copies of the IDSes and returning the copies to the Applicants' representative. In addition, subsequent to the mailing of the prior Office Action, Applicants filed a third IDS on April 14, 2004, and Applicants similarly request that the Examiner acknowledge consideration of the references of that IDS by initialing each reference on a copy of the IDS and returning the copy to the Applicants' representative.

Statutory-Type Double Patenting Rejection

The Examiner has rejected each of the previously pending claims 72-75 and 82-138 under 35 U.S.C. § 101 as being unpatentable based on statutory-type double patenting over claims 62-71 and 76-147 of co-pending Patent Application No.

09/878,948 ("the '948 application"). As noted in the Office Action, such a rejection is appropriate only when the claims in the two applications are "drawn to <u>identical</u> subject matter" (emphasis added).

However, each of the previously pending claims 72-75 and 82-138 of the current application differs from claims 62-71 and 76-147 of the '948 application in one or more respects that causes the respective claimed subject matters to not be identical, and thus this rejection is inappropriate. As one example of a type of distinction between the previously pending claims of the current application and the cited claims of the '948 application, the cited claims of the '948 application generally recited that a client or other external entity specified an interest in receiving notification for specified events or occurrences (e.g., when specified criteria are satisfied), while the previously pending claims 72-75 and 82-138 of the current application generally recite that events of interest for clients or other external entities are automatically detected or identified, such as based on monitored activities.

In particular, the independent claims 62, 70, 71, 76, 80, 81, 82, 93, 130, 136 and 137 of the '948 application at the time of the Examiner's rejection recited claims elements as follows: "under control of multiple of the executing state client modules, sending to the intermediary module a notification request for a specified type of event such that the state client module that sent the notification request requests to be notified when the specified type of event occurs" (claim 82); "receiving from a first client an indication of an interest in receiving notification when a specified event that is related to at least one of the context attributes occurs" (claims 62, 70 and 71); "receiving from a module a request to receive notification when a specified type of occurrence related to at least one of the multiple state attributes is detected" (claims 93, 130, 133 and 136); "receiving from a module an indication of a condition related to values of one or more specified state attributes, the indicated condition such that the module desires to be notified when the condition has been satisfied" (claim 137); "receiving an indication of an event that is related to at least one of the state attributes" (claim 76); and "determining that an occurrence of an event is of interest if criteria related to the event are satisfied by the occurrence" (claims 80 and 81).

Conversely, the previously pending independent claims 72, 82, 97, 124, 127, 130, 131, 137 and 138 of the current application recited claims elements as follows: "monitoring activities of a module related to at least one of the state attributes; and automatically and without other input from the module, determining based on the monitoring an event whose occurrence is of interest to the module" (claim 72); "under control of the intermediary module, . . . analyzing the received state attribute value requests in order to determine events related to the received state attribute value requests such that occurrences of the determined events may be of interest to at least some of the state client modules; and without other intervention from the state client modules, determining to monitor for occurrences of the determined events" (claim 82); "automatically analyzing received information related to at least one of the multiple state attributes in order to determine at least one type of occurrence that may be of interest to at least one determined module" (claim 97); "without receiving instructions to do so from that module, analyzing received information from that module in order to determine at least one type of event whose occurrences are likely to be of interest to the module" (claims 131 and 137); "automatically analyzing received information related to at least one of the multiple attributes in order to determine at least one type of occurrence that may be of interest to at least one determined module" (claim 124); "analyzing received information related to at least one of the multiple attributes in order to determine at least one type of occurrence that may be of interest to at least one module" (claim 127); "automatically analyzing received information related to at least one of the multiple state attributes in order to determine at least one type of occurrence that may be of interest to at least one module" (claim 130); and "automatically analyzing received information from that module in order to determine at least one type of event whose occurrences are likely to be of interest to the module" (claim 138).

Thus, as the claims of the current application in both previous and currently pending form do not have identical subject matter to claims 62-71 and 76-147 of the '948 application, the Examiner's rejection under 35 U.S.C. § 101 is traversed. Moreover, subsequent to the Examiner's rejection, each of the independent claims of the '948 application other than claim 82 has been amended in a manner to include additional claim elements that are also not recited in the pending claims of the current

application, and thus the Examiner's rejection under 35 U.S.C. § 101 is traversed for this further reason as well.

As the Examiner indicated in the prior Office Action that claims 82-96 contained allowable subject matter and were rejected based solely on this statutory-type double patenting rejection under 35 U.S.C. § 101, these claims are now in condition for allowance. Similarly, new claims 139-148 that depend from claim 82 are allowable for at least the same reasons as claim 82. In addition, new independent computer-readable medium claim 149 and new independent computing device claim 150 each recite language similar to that of independent method claim 82, and Applicants believe that claims 149 and 150 are thus also allowable for at least the same reasons as claim 82.

Other Rejections

The Examiner has rejected each of the previously pending claims 72-75 and 97-138 as being unpatentable over Bates, either alone or in combination with Schmidt. However, each of the pending claims as rejected includes features and provides functionality not disclosed by these references, and thus are each allowable over these references.

In particular, as noted above, each of the previously pending claims of the current application generally recite that events of interest for clients or other external entities are automatically detected or identified, such as based on monitored activities, so that appropriate notifications can be supplied when such events occur. For example, independent claim 72 as amended recites "monitoring activities of a module related to at least one of the state attributes; and without other input from the module or from a user, automatically determining an event whose occurrence is of interest to the module, the determining based on the monitored module activities". The other independent claims contain similar language, as noted above.

However, neither Bates nor Schmidt appear to include any teaching or suggestion to automatically identify or determine events that may be of interest to an external entity, such as based on monitoring relevant activities to assist in that automatic identification or determination. Instead, as noted by the Examiner in the prior

Office Action, "Bates . . . describes the trader <u>receives a request from a client</u> <u>application</u> [that] . . . may include interest in receiving notification when a specified event . . . occurs ". (Office Action dated March 15, 2004, page 4, emphasis added.) Moreover, Bates stresses that it is this explicit registration by clients of events of interest that "enables scalable and flexible construction of active applications". (Bates, page 5, 2nd paragraph of section 2.2.) Thus, not only does Bates not teach or suggest the claimed techniques for automatically identifying events and/or occurrences of interest, Bates teaches away from such a technique by emphasizing that manual client registration is a critical aspect that enables the Bates system. Thus, for at least this reason, the previous and currently pending claims are patentable over Bates and Schmidt.

In addition, each of the new independent claims 151, 157 and 158 are patentable not only for the indicated reasons, but also based on additional recited claim elements that are not taught or suggested by Bates or Schmidt.

For example, independent claim 151 generally further recites that multiple types of information may be used as part of the automatic determination of types of occurrences of interest, and in particular that additional information that describes values of state attributes may be used. Dependent claims 154-156 further recite additional details about the additional information being metadata about the state attribute values and/or information about state attribute value uncertainty or accuracy. In contrast, neither Bates nor Schmidt appears to include any teaching or suggestion of using additional information about attribute values, such as metadata, as part of the event identification and/or detection process. Instead, the location service of Bates appears to lack any idea of using such metadata or other additional information for any purpose. Thus, for at least that reason, independent claim 151 is patentable over the cited prior art references, as are the claims that depend from claim 151.

Independent claim 157 generally further recites that as part of the event detection and notification process, multiple values are received for one of the state attributes and a mediated value is generated for that state attribute and used as part of the process. In contrast, neither Bates nor Schmidt appears to include any teaching or suggestion of mediating between multiple available values for a state attribute. Instead,

the location service of Bates appears to receive and provide a single definitive location value at a time for an object of interest, and thus would have no need or ability to perform such mediation. Thus, for at least that reason, independent claim 157 is patentable over the cited prior art references.

Independent claim 158 generally further recites that received values for state attributes are used to generate modeled values for other state attributes at higher levels of abstraction, and these modeled values for the abstract state attributes are used as part of the automatic identification or determination of types of occurrences of interest. Other new dependent claims 159-163 provide additional details related to the abstract state attributes. In contrast, neither Bates nor Schmidt appears to include any teaching or suggestion of generating modeled values for abstract state attributes using received values for other state attributes for any purpose, and in particular not for using that information as part of the event identification or determination process. Instead, the location service of Bates appears to merely receive and provide information about location values. Thus, for at least that reason, independent claim 158 is patentable over the cited prior art references, as are the claims that depend from claim 158.
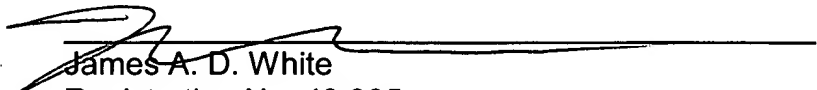
The pending dependent claims also recite additional features lacking in the cited references, and are thus allowable on the basis of those features as well, although these additional features are not enumerated here for the sake of brevity.

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Conclusion

In light of the above remarks, Applicants respectfully submit that all of the pending claims are allowable. Applicants therefore respectfully request the Examiner to reconsider this application and timely allow all pending claims. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 694-4815.

Respectfully submitted,
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Enclosures:
Postcard
Fee Transmittal (+ copy)
Petition for an Extension of Time (+ copy)

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